

Applicant: Takao Tsuruoka
Application No.: 10/630,438

REMARKS/ARGUMENTS

The present application contains claims 2-14, 16-32, and 35-46. Claims 19, 21-24, 33, and 37-41 have been amended. Claims 1 and 15 have been canceled and their limitations respectively incorporated in new claim 43. Claims 33 and 34 have been canceled and their limitations respectively incorporated in new claim 44. Claims 45 and 46 have been newly added. Claims 2-14, 18, 20, 26, 27, 29 and 32 have been withdrawn from consideration as being directed to a non-elected invention. It is understood that, upon the allowance of a generic claim, applicant will be entitled to consideration of claims for additional species which depend from or otherwise require all of the limitations of an allowable generic claim, as provided for by 37 C.F.R. §1.141. In the event that some (if not all) of the withdrawn claims are allowed, applicant has amended withdrawn claims 2, 18, 20, 26 and 29 so that they do not depend from a cancelled claim, but from the new claims which replace the original main claims 1 and 33 or the dependent claims 15 and 34.

It is assumed that the new title provided in the prior amendment has been accepted since no objection is recited in the Final Action.

Information Disclosure Statement

Responsive to the Examiner's statement that the Information Disclosure Statement Applicant filed on June 8, 2007, although placed in the application file has not be filed considered since it fails to provide a concise explanation of the relevancy of Chinese Patent No. 1,292,621A, Applicant has submitted herewith the Patent Abstract of Japanese Patent Publication No. 2000-341559. This English language Abstract is precisely a translation of an Abstract in Japanese Patent Publication No. 2000-341559, which is the parent of Chinese Patent No. 1,292,621A. The requisite fee for the Supplemental Information Disclosure Statement ("SIDS")

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accompanies this Amendment. Entry and consideration of the accompanying SIDS is respectfully requested.

Claim Rejections - 35 U.S.C. §112

It is noted that the rejection of claims 17 and 28 under 35 U.S.C. §112 has been withdrawn.

Responsive to the Examiner's statement that the information disclosure statement (IDS) although timely filed, lacks an explanation of its relevance, applicant submits herewith a Supplemental IDS with an explanation of its relevance.

Claim Rejections - 35 U.S.C. §101

The rejection of claims 28, 30 and 31 under 35 U.S.C. §101 is respectfully traversed.

Claims 28, 30 and 31 have been amended to comply with §101 and it is submitted that they now comply with the requirements of §101.

Claim Rejections - 35 U.S.C. §102 and §103

It is noted that the rejections of the elected claims based on Prentice et al. ("785) under 35 U.S.C. §102(e) and §103 have been withdrawn.

The rejection of claims 1 and 33 based on Tariki (US 2002/0008766) in view of Kato et al. (JP 63-046077) under 35 U.S.C. §103(a) is respectfully traversed as regards amended claims 1 and 33 and new claims 43 and 44.

Regarding new claim 43 which replaces and contains the limitations of claims 1 and 15, and claim 44, which replaces and contains the limitations of claims 33 and 34, the Examiner states that Tariki discloses subtracting dark current from an

image and admits that 2 storage operations are required to reduce dark current, i.e., 1) storing the output of the CCD (i.e., dark current) with the shutter closed and 2) storing the CCD output with the shutter open, the dark current output then being subtracted from the image.

The examiner relies upon Kato for teaching “calculating” (which the examiner states is equivalent to “estimating”) dark current signals based on such data as temperature of the pickup element and accumulation time, further stating that it would have been obvious to one of ordinary skill in the art at the time the invention was made to estimate the dark current as taught by Kato and remove the dark current without the need for a separate exposure to obtain the dark current, as taught by Tariki.

Making reference to the English translation entitled “Constitution,” Kato successively reads out each “picture element” (i.e., “pixel”) and also reads out the constants α and β associated with the pixel being read out and calculates dark current in circuit 7 using photographing time (t), constants α and β , and temperature. Kato fails to teach or even remotely suggest parameter calculating means (see Fig.2 elements 31 and 32) **and** noise amount calculating means (Fig. 2 element 33), as well as the text at page 21, line 1 to page 23, line 22 which describes the units 31-33. Briefly, the four (4) functions respectively shown in Figs. 6A-6D, and stored in parameter ROM 32, are used to calculate the coefficients A, B, C and D using the temperature T, gain G and shutter speed S that are dynamically acquired. The calculated coefficients are then used by the noise amount calculating means 33 to estimate the noise based on the signal level L of the pixel being corrected. Kato fails to teach or even remotely suggest these capabilities and Tariki likewise fails to teach these capabilities and it is submitted that new claims 43 and

44 are patentable over Kato combined with Tariki. New claims 45 and 46 respectively depend from claims 43 and 44 and are likewise submitted to patentably distinguish over Kato combined with Tariki.

The rejection of claims 15, 19, 22, 23, 34, 37, 39 and 40 based on Tariki (US 2002/0008766) in view of Kato et al. (JP 63-046077) and further in view of Nishi (JP 11-317,516) under 35 U.S.C. §103(a) is respectfully traversed as regards claims 19, 22, 23, 37, 39 and 40, claims 15 and 34 having been canceled and their limitations respectively incorporated in new claims 43 and 44.

It is submitted that since claims 19, 22 and 23 depend from new claim 43 and since claims 37, 39 and 40 depend from new claim 44, that these claims are patentable over Tariki and Kato for the same reasons set forth above.

The examiner admits that Tariki and Kato fail to teach parameter calculating means and further admits that Kato does not explicitly teach how the temperature is determined and relies upon Nishi for determining the temperature of an imaging device by calculating the temperature from dark current signals. It is clear from the Figs. 6A-6D of the present application and the text describing the these figures set forth above that temperature T is a parameter of a function whereas, although T is a calculated value in Nishi, T is **not** a parameter of a function in Nishi used to derive a noise amount.

In addition, new claim 43 recites “parameter calculating means for calculating parameters on the basis of the signal value level of the signals and at least one type of information selected from: **the temperature of the image pickup element**, the gain for the signals and the shutter speed during shooting.”

Making reference to the part of new claims 43 and 44 shown in bold, parameters of a function are calculated employing, for example, **the temperature**

of the image pickup element. The teaching of Nishi relied upon by the examiner is exactly **the reverse**, namely, the temperature T is the **final** calculated value and is clearly **not** a parameter of a function, for example, which is employed in the present application to derive a noise amount. Since claims 19, 22, 23 depend from claim 43 and claims 37, 39 and 40 depend from claim 44, it is submitted that these claims are patentable over Tariki in view of Kato et al. and further in view of Nishi.

New claim 43 set forth in this Amendment substantially corresponds to claim 1 in the counterpart Japanese Application No. 2002-229059 when it was granted (as Registration No. 3934506). New claim 43 recites “parameters of a function.”

The Examiner in the Japanese Patent Office confirmed patentability of the invention of the basic Japanese application as mentioned above. Japanese Application No. 2002-229059, containing claim 1 mentioned above issued as Japanese Patent Registration No. 3934506.

The rejection of claims 16 and 35, based on Tariki in view of Kato et al. and Nishi and further in view of Bloom (US 7,113,210) under 35 U.S.C. §103(a) is respectfully traversed.

Even assuming, for the sake of argument, that Bloom is combinable with Tariki in view of Kato et al. and Nishi, it is submitted that Bloom lacks the same teachings lacking in Tariki, Kato et al. and Nishi and it is submitted that claims 16 and 35, which respectively depend from claims 43 and 44, patentably distinguish over Tariki in view of Kato et al. and Nishi and further in view of Bloom.

It is noted that claims 17, 21, 24, 25, 36, 38 41 and 42 are allowable and will be allowed upon being rewritten to include all of the limitations of their base claim and any intervening claims. It is submitted that, since the claims from which these allowable claims depend are submitted to be allowable over the cited prior art for the reasons cited above, there is no need to amend the allowable claims.

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It is noted that claims 28, 30 and 31 are free of any prior art rejection and, since these claims now comply with §101, they should be allowed.

In view of the foregoing, reconsideration and allowance of claims 16, 19, 22, 23, 28, 30, 31, 33, 35, 37, 39, 40, 43 and 44, together with allowable claims 17, 21, 24, 25, 36, 38, 41 and 42 are earnestly solicited.

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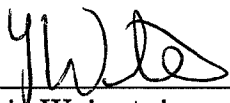
Conclusion

If the Examiner believes that any additional minor formal matters need to be addressed in order to place this application in condition for allowance, or that a telephone interview will help to materially advance the prosecution of this application, the Examiner is invited to contact the undersigned by telephone at the Examiner's convenience.

In view of the foregoing remarks, Applicants respectfully submit that the present application, including claims 16-17, 19, 21-25, 28, 30, 31, and 33-46, is in condition for allowance and a notice to that effect is respectfully requested.

Respectfully submitted,

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Enclosures